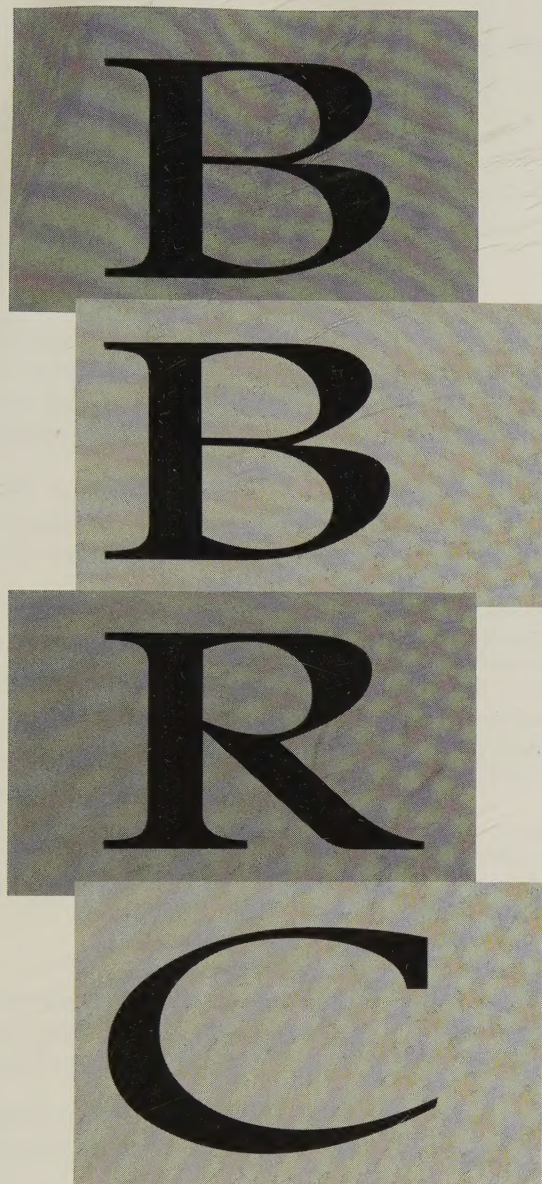




Biochemical
and Biophysical
Research
Communications

EDITORS

Ernesto Carafoli

I. C. Gunsalus

Akira Ichihara

James D. Jamieson

Yasuo Kagawa

M. Daniel Lane

William J. Lennarz

Masami Muramatsu

Tsuneo Omura

Sten Orrenius

Jacques Pouyssegur

William S. Reznikoff

Volume 259, 1999



ACADEMIC PRESS

Copyright © 1999 by Academic Press

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the Publisher. *Exceptions:* Explicit permission from Academic Press is not required to reproduce a maximum of two figures or tables from an Academic Press article in another scientific or research publication provided that the material has not been credited to another source and that full credit to the Academic Press article is given. In addition, authors of work contained herein need not obtain permission in the following cases only: (1) to use their original figures or tables in their future works; (2) to make copies of their papers for use in their classroom teaching; and (3) to include their papers as part of their dissertations.

The appearance of the code at the bottom of the first page of an article in this journal indicates the Publisher's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (222 Rosewood Drive, Danvers, Massachusetts 01923), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1999 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0006-291X/99 \$30.00

MADE IN THE UNITED STATES OF AMERICA

This journal is printed on acid-free paper.



CONTENTS OF VOLUME 259

Number 1, May 27, 1999

BREAKTHROUGHS AND VIEWS

- | | | |
|---|---------------------|----------|
| Cartilage-Derived Growth Factor and Antitumor Factor: Past, Present, and Future Studies | Fujio Suzuki | 1 |
|---|---------------------|----------|

REGULAR ARTICLES

- | | | |
|---|---|-----------|
| Pulsatile Stretch Activates Mitogen-Activated Protein Kinase (MAPK) Family Members and Focal Adhesion Kinase (p125 ^{FAK}) in Cultured Rat Cardiac Myocytes | Yoshinori Seko, Yuko Seko, Naoyuki Takahashi, Kazuyuki Tobe, Takashi Kadowaki, and Yoshio Yazaki | 8 |
| HSF1 Activation Occurs at Different Temperatures in Somatic and Male Germ Cells in the Poikilotherm Rainbow Trout | Pascale Le Goff and Denis Michel | 15 |
| Phosphorylation/Dephosphorylation of Androgen Receptor as a Determinant of Androgen Agonistic or Antagonistic Activity | Long G. Wang, Xiao M. Liu, Willi Kreis, and Daniel R. Budman | 21 |
| Developmentally Regulated Expression of a Nonmuscle Myosin Heavy Chain IIB Inserted Isoform in Rat Brain | Masayuki Takahashi, Takaaki Hirano, Keiji Uchida, and Akihiko Yamagishi | 29 |
| Identification of Three Alternatively Spliced Variants of Human CD28 mRNA | Giovanni Magistrelli, Pascale Jeannin, Greg Elson, Jean-François Gauchat, Thien NGoc NGuyen, Jean-Yves Bonnefoy, and Yves Delneste | 34 |
| Phosphorylation Induces Conformational Changes in the Leukocyte NADPH Oxidase Subunit p47 ^{phox} | Hee-Sae Park, In Soo Kim, and Jeen-Woo Park | 38 |
| Multidrug-Resistant Phenotype Influences the Differentiation of a Human Colon Carcinoma Cell Line | Odile Rimet, Aline Mirrione, and Yves Barra | 43 |
| The Requirement of both Intracellular Reactive Oxygen Species and Intracellular Calcium Elevation for the Induction of Heparin-Binding EGF-like Growth Factor in Vascular Endothelial Cells and Smooth Muscle Cells | Yoshiro Kayanoki, Shigeki Higashiyama, Keiichiro Suzuki, Michio Asahi, Sumio Kawata, Yuji Matsuzawa, and Naoyuki Taniguchi | 50 |
| A Detailed Study on the Role of Sex Steroid Milieu in Determining Plasma Leptin Concentrations in Adult Male and Female Rats | Hajime Watanobe and Toshihiro Suda | 56 |
| Cloning and Characterization of SOB1, a New Testis-Specific cDNA Encoding a Human Sperm Protein Probably Involved in Oocyte Recognition | A. Lefevre, C. Duquenne, M. F. Rousseau-Merck, E. Rogier, and C. Finaz | 60 |
| Loss of the Bcl-2 Phosphorylation Loop Domain Increases Resistance of Human Leukemia Cells (U937) to Paclitaxel-Mediated Mitochondrial Dysfunction and Apoptosis | Shujie Wang, Zhiliang Wang, Lawrence Boise, Paul Dent, and Steven Grant | 67 |

Direct Microsensor Measurement of Nitric Oxide Production by the Osteoclast	Susan F. Silverton, Olugbenga A. Adebajo, Baljit S. Moonga, Emmanuel M. Awumey, Tadeusz Malinski, and Mone Zaidi	73
Activation of G _{i1} by Lysophosphatidic Acid Receptor without Ligand in the Baculovirus Expression System	Akira Yoshida and Hiroshi Ueda	78
Increased Uncoupling Protein2 mRNA in White Adipose Tissue, and Decrease in Leptin, Visceral Fat, Blood Glucose, and Cholesterol in KK-A ^y Mice Fed with Eicosapentaenoic and Docosahexaenoic Acids in Addition to Linolenic Acid	Cha Seung Hun, Kyoko Hasegawa, Terue Kawabata, Miyuki Kato, Teruhiko Shimokawa, and Yasuo Kagawa	85
Induction of Heme Oxygenase-1 in the Rat Brain by Kainic Acid-Mediated Excitotoxicity: The Dissociation of mRNA and Protein Expression in Hippocampus	Kazuhiro Nakaso, Michio Kitayama, Koji Kimura, Toru Yanagawa, Eisaku Ohama, Kenji Nakashima, Tetsuro Ishii, and Kazuo Yamada	91
Bone Morphogenetic Protein-2 Enhances Osteoclast Formation Mediated by Interleukin-1 α through Upregulation of Osteoclast Differentiation Factor and Cyclooxygenase-2	Masanori Koide, Yoshiyuki Murase, Kenji Yamato, Toshihide Noguchi, Nobuo Okahashi, and Tatsuji Nishihara	97
<i>In Vivo</i> Interaction of AF-6 with Activated Ras and ZO-1	Takaharu Yamamoto, Naozumi Harada, Yoji Kawano, Shinichiro Taya, and Kozo Kaibuchi	103
Fragments from Actin Binding Protein (ABP-280; Filamin) Insert into Reconstituted Lipid Layers	Wolfgang H. Goldmann, Jens M. Teodoridis, C. Pal Sharma, Bin Hu, and Gerhard Isenberg	108
Sequence Analysis Identifies a Ras-Associating (RA)-like Domain in the N-Termini of Band 4.1/JEF Domains and in the Grb7/10/14 Adapter Family	Jérôme Wojcik, Jean-Antoine Girault, Gilles Labesse, Jacques Chomilier, Jean-Paul Mornon, and Isabelle Callebaut	113
Mapping Regions of the β 1 Integrin Cytoplasmic Domain Involved in Migration and Survival in Primary Oligodendrocyte Precursors Using Cell-Permeable Homeopeptides	Philip C. BATTERY, Chandike M. Mallawaarachchi, Richard Milner, Patrick Doherty, and Charles French-Constant	121
Glycated Serum Albumin-Induced Nitric Oxide Production in Vascular Smooth Muscle Cells by Nuclear Factor κ B-Dependent Transcriptional Activation of Inducible Nitric Oxide Synthase	Yoshiyuki Hattori, Nobuyuki Banba, Steven S. Gross, and Kikuo Kasai	128
No Metal Cofactor in Orotidine 5'-Monophosphate Decarboxylase	Weidong Cui, Jane G. DeWitt, Susan M. Miller, and Weiming Wu	133
Role of Tryptophanyl Residues in Tobacco Acetolactate Synthase	Chom-Kyu Chong, Hee-Jee Shin, Soo-Ik Chang, and Jung Do Choi	136
Porcine Guanylin and Uroguanylin: cDNA Sequences, Deduced Amino Acid Sequences, and Biological Activity of the Chemically Synthesized Peptides	Hans-Jürgen Mägert, Oliver Hill, Hans-Dieter Zucht, Silke Martin, Markus Meyer, Wolf-Georg Forssmann, and Knut Adermann	141

Molecular and Histological Evaluation of Pancreata from Patients with a Mitochondrial Gene Mutation Associated with Impaired Insulin Secretion	Shuichi Otabe, Kazuki Yasuda, Yasumichi Mori, Kotaro Shimokawa, Hiroko Kadowaki, Atsuo Jimi, Kyohei Nonaka, Yasuo Akanuma, Yoshio Yazaki, and Takashi Kadowaki	149
γ -Tocopherol Decreases Ox-LDL-Mediated Activation of Nuclear Factor- κ B and Apoptosis in Human Coronary Artery Endothelial Cells	Dayuan Li, Tom Saldeen, and Jawahar L. Mehta	157
Mapping of the Antigenic Regions of Streptokinase in Humans after Streptokinase Therapy	Isis Torr��ns, Osvaldo Reyes, Ariana G. Ojalvo, Alina Seralena, Glay Chinaea, Luis J. Cruz, and Jos�� de la Fuente	162
Complexation of 1,2,4-Benzenetriol with Inorganic and Ferritin-Released Iron <i>in Vitro</i>	Sarfaraz Ahmad and G. S. Rao	169
Interleukin-17 Induces Rapid Tyrosine Phosphorylation and Activation of Raf-1 Kinase in Human Monocytic Progenitor Cell Line U937	S. Vaidyanathan Subramaniam, LaTanya L. Pearson, and Samuel E. Adunyah	172
Regulation of Angiogenin Expression in Human HepG2 Hepatoma Cells by Mediators of the Acute-Phase Response	Sigitas J. Verselis, Karen A. Olson, and James W. Fett	178
Reduction of Lipid Hydroperoxides by Apolipoprotein B-100	Ryuichi Mashima, Shinichi Yoshimura, and Yorihiro Yamamoto	185
Transcribed Dinucleotide Microsatellites and Their Associated Genes from Channel Catfish <i>Ictalurus punctatus</i>	Zhanjiang Liu, Guo Tan, Ping Li, and Rex A. Dunham	190
Glutathione-Dependent Oxidative Modification of Protoporphyrin and Other Dicarboxylic Porphyrins by Mammalian and Plant Peroxidases	N. J. Jacobs, H. G. Kruszyna, J. S. L. Hier, F. E. Dayan, S. O. Duke, F. Pont, and F. P. Montforts	195
Interindividual Differences in Hepatic Expression of CYP3A4: Relationship to Genetic Polymorphism in the 5'-Upstream Regulatory Region	Anna Westlind, Lena L��fberg, Niclas Tindberg, Tommy B. Andersson, and Magnus Ingelman-Sundberg	201
Cloning and Characterization of the Promoter Region of the Wilson Disease Gene	Won Jun Oh, Eun Kyung Kim, Kee Don Park, Si Houn Hahn, and Ook Joon Yoo	206
Coupling of Manganese Peroxidase-Mediated Lipid Peroxidation with Destruction of Nonphenolic Lignin Model Compounds and ¹⁴ C-Labeled Lignins	Alexander Kapich, Martin Hofrichter, Tamara Vares, and Annele Hatakka	212
Allylic or Benzylic Stabilization Is Essential for Catalysis by Bacterial Benzyl Alcohol Dehydrogenases	Abigale J. Curtis, Megan C. Shirk, and Ray Fall	220
Overexpression of Wild-Type and Catalytically Inactive Forms of GRK2 and GRK6 Fails to Alter the Agonist-Induced Phosphorylation of the C5a Receptor (CD88): Evidence That GRK6 Is Autophosphorylated in COS-7 Cells	Marie Danielle Milcent, Thierry Christophe, Marie-Jos��phe Rabet, Marianne Tardif, and Fran��ois Boulay	224

ERRATA

Volume **256**, Number 1 (1999), in Article ID bbrc.1999.0263, "SEA-scFv as a Bifunctional Antibody: Construction of a Bacterial Expression System and Its Functional Analysis," by Naoki Sakurai, Toshio Kudo, Masanori Suzuki, Kouhei Tsumoto, Shin-ichi Takemura, Hideaki Kodama, Shinji Ebara, Atsushi Teramae, Yu Katayose, Masao Shinoda, Tadashi Kurokawa, Yuji Hinoda, Kohzoh Imai, Seiki Matsuno, and Izumi Kumagai, pages 223–230 **230**

Volume **257**, Number 2 (1999), in Article ID bbrc.1999.0493, "Expression of *TRAIL* and Its Receptors in Human Brain Tumors," by Stephan Frank, Uta Köhler, Gabriele Schackert, and Hans K. Schackert, pages 454–459 **230**

Volume **257**, Number 3 (1999), in Article ID bbrc.1999.0537, "Repression of Hepatitis B Virus X Gene Expression by Hammerhead Ribozymes," by Young Kyeung Kim, Ensung Junn, Inwon Park, Younghoon Lee, Changwon Kang, and Jeong Keun Ahn, pages 759–765 **231**

Volume **257**, Number 3 (1999), in Article ID bbrc.1999.0561, "A Two-Component Tetrachlorohydroquinone Reductive Dehalogenase System from the Lignin-Degrading Basidiomycete *Phanerochaete chrysosporium*," by G. Vijay Bhasker Reddy and Michael H. Gold, pages 901–905 **232**

Number 2, June 7, 1999

Determination of a Putative Phosphate-Containing Peptide in Calreticulin **Steven E. Cala** **233**

Superoxide Anion-Induced Formation of Inositol Phosphates Involves Tyrosine Kinase Activation in Smooth Muscle Cells from Rat Mesenteric Artery **Lingyun Wu and Jacques de Champlain** **239**

Selenocysteine-Containing Thioredoxin Reductase in *C. elegans* **Vadim N. Gladyshev, Michael Krause, Xue-Ming Xu, Konstantin V. Korotkov, Gregory V. Kryukov, Qi-An Sun, Byeong Jae Lee, John C. Wootton, and Dolph L. Hatfield** **244**

M-Type 6-Phosphofructo-2-kinase/Fructose-2,6-bisphosphatase Is the Product of a Late Muscle Differentiation Gene **Pascale Vandoolaeghe, Marie-Agnès Gueuning, and Guy G. Rousseau** **250**

Subclass Specificity of Autoantibodies against Myosin in Patients with Idiopathic Dilated Cardiomyopathy: Pro-inflammatory Antibodies in DCM Patients **Rahat S. Warraich, Michael J. Dunn, and Magdi H. Yacoub** **255**

Characterization of a 3'–5' Exonuclease Associated with VDJP **Lei Zhu and Brian D. Halligan** **262**

Mass Spectrometric Determination of a Novel Modification of the N-Terminus of Histidine-Tagged Proteins Expressed in Bacteria **Z. Yan, G. W. Caldwell, P. A. McDonell, W. J. Jones, A. August, and J. A. Masucci** **271**

Calcium-Induced p56^{Lck} Phosphorylation in Human T Lymphocytes via Calmodulin Dependent Kinase **R. A. Franklin, A. Mcleod, and P. J. Robinson** **283**

Engagement of Spectrin and Actin in Capping of FcγRII Revealed by Studies on Permeabilized U937 Cells **Katarzyna Kwiatkowska and Andrzej Sobota** **287**

Unique Features of Dendritic Cells in IFN- γ Transgenic Mice: Relevance to Cancer Development and Therapeutic Implications	Sk. Md. Fazle Akbar, Kazunori Kajino, Kenji Tanimoto, Ken-ichi Yamamura, Morikazu Onji, and Okio Hino	294
Role of the 78-kDa Glucose-Regulated Protein as an Activity Modulator of Protein Phosphatase 1 γ 2	Yang-Sook Chun, Jong-Wan Park, Myung-Suk Kim, Hiroshi Shima, Minako Nagao, Seung-Hoon Lee, Sang-Woon Park, and Myung-Hee Chung	300
Cloning of a cDNA Encoding a Novel Cytochrome P450 from the Insect <i>Locusta migratoria</i> : CYP6H1, a Putative Ecdysone 20-Hydroxylase	Jochen Winter, Graeme Bilbe, Hanny Richener, Bernd Sehringer, and Hartmut Kayser	305
Detection of Apolipoprotein B mRNA Editing by Peptide Nucleic Acid Mediated PCR Clamping	Shaobin Zhong, Nga Yen Nguyen, and Thomas L. Eggerman	311
Monocytic Differentiation of HL-60 Cells Is Characterized by the Nuclear Translocation of Phosphatidylinositol 3-Kinase and of Definite Phosphatidylinositol-Specific Phospholipase C Isoforms	Luca M. Neri, Marco Marchisio, Maria Luisa Colamussi, and Valeria Bertagnolo	314
Stimulation of Prolactin Release by Prolactin-Releasing Peptide in Rats	Hirokazu Matsumoto, Jiro Noguchi, Yasuko Horikoshi, Yuji Kawamata, Chieko Kitada, Shuji Hinuma, Haruo Onda, Osamu Nishimura, and Masahiko Fujino	321
Modulation of Cytochrome <i>c</i> -Mediated Extramitochondrial NADH Oxidation by Contact Site Density	D. Marzulli, G. La Piana, E. Fransvea, and N. E. Lofrumento	325
Detection of Multiple Patterns of Oscillatory Oxygen Consumption in Single Mouse Islets of Langerhans	Sung-Kwon Jung, Craig A. Aspinwall, and Robert T. Kennedy	331
Clusterin Prevents Aggregation of Neuropeptide 106-126 <i>in Vitro</i>	S. McHattie and N. Edington	336
Platelet Surface Membranes Are Highly Mitogenic for Coronary Artery Smooth Muscle Cells—A Novel Mechanism for Sustained Proliferation after Vessel Injury?	Artur-Aron Weber, Tom-Philipp Zucker, and Karsten Schrör	341
A Novel Polymorphism in the MCP-1 Gene Regulatory Region That Influences MCP-1 Expression	Brad H. Rovin, Ling Lu, and Ramesh Saxena	344
A Novel Gene (Oculomedin) Induced by Mechanical Stretching in Human Trabecular Cells of the Eye	Yukiko Sato, Toshihiko Matsuo, and Hiroshi Ohtsuki	349
Selective Oxidation of Methionine Residues in Prion Proteins	Boon-Seng Wong, Hui Wang, David R. Brown, and Ian M. Jones	352
Identification of Phosphorylation Sites in the PKD1-Encoded Protein C-Terminal Domain	Hsi-Ping Li, Lin Geng, Christopher R. Burrow, and Patricia D. Wilson	356

Synergistic Activation of the Human Btk Promoter by Transcription Factors Sp1/3 and PU.1	Susanne Müller, Alex Maas, Tahmina Choudhuri Islam, Paschalis Sideras, Guntram Suske, Sjaak Philipsen, Kleanthis G. Xanthopoulos, Rudolf W. Hendriks, and C. I. Edvard Smith	364
Activity in Monomers of Human Cytomegalovirus Protease	Barry Holwerda	370
Discrepancies in the Measurement of UVC-Induced 8-Oxo-2'-deoxyguanosine: Implications for the Analysis of Oxidative DNA Damage	Mark D. Evans, Marcus S. Cooke, Ian D. Podmore, Qinguo Zheng, Karl E. Herbert, and Joseph Lunec	374
Antiproliferative and GH-Inhibitory Activity of Chimeric Peptides Consisting of GHRP-6 and Somatostatin	P. Dasgupta, A. T. Singh, and R. Mukherjee	379
Two Divergent Signaling Pathways for TGF- β Separated by a Mutation of Its Type II Receptor Gene	Shi-Long Lu, Masahiro Kawabata, Takeshi Imamura, Kohei Miyazono, and Yasuhito Yuasa	385
RNase Treatment of Yeast and Mammalian Cell Extracts Affects <i>in Vitro</i> Substrate Methylation by Type I Protein Arginine N-Methyltransferases	Adam Frankel and Steven Clarke	391
Human Cathepsins F and W: A New Subgroup of Cathepsins	Th. Wex, B. Levy, H. Wex, and D. Brömme	401
Precise Identification of Gene Products in Hearts after <i>in Vivo</i> Gene Transfection, Using Sendai Virus-Coated Proteoliposomes	Tomie Kawada, Wee Soo Shin, Yoko Nakatsuru, Toshiyuki Koizumi, Aiji Sakamoto, Toshiyuki Nakajima, Yoko Okai-Matsuo, Mikio Nakazawa, Hiroshi Sato, Takatoshi Ishikawa, and Teruhiko Toyo-Oka	408
A HMG-CoA Reductase Inhibitor Improved Regression of Atherosclerosis in the Rabbit Aorta without Affecting Serum Lipid Levels: Possible Relevance of Up-Regulation of Endothelial NO Synthase mRNA	Hatsuyo Kano, Toshio Hayashi, Daigo Sumi, Teiji Esaki, Yukako Asai, Navin Kumar Thakur, Muthuvel Jayachandran, and Akihisa Iguchi	414
A Model of the Complex between Cyclin-Dependent Kinase 5 and the Activation Domain of Neuronal Cdk5 Activator	Kuo-Chen Chou, Keith D. Watenpaugh, and Robert L. Heinrikson	420
Alteration of hMSH2 and DNA Polymerase β Genes in Breast Carcinomas and Fibroadenomas	Nandan Bhattacharyya, Huan-Chao Chen, Sharon Grundfest-Broniatowski, and Sipra Banerjee	429
Posttranscriptional Regulation of Mammalian Methionine Synthase by B ₁₂	Sumedha Gulati, Lawrence C. Brody, and Ruma Banerjee	436
Effects of Promoter Mutations on the <i>in Vivo</i> Regulation of the <i>cop</i> Operon of <i>Enterococcus hirae</i> by Copper(I) and Copper(II)	Haibo Wunderli-Ye and Marc Solioz	443
Reactivation and Refolding of a Partially Folded Creatine Kinase Modified by 5,5'-Dithio-bis(2-nitrobenzoic Acid)	Yi Yang, Yong-Doo Park, Tian Wei Yu, and Hai Meng Zhou	450

Tentative Novel Mechanism of the Bystander Effect in Glioma Gene Therapy with HSV-TK/GCV System	Shaochun Bai, Liping Du, Wanqing Liu, Ian R. Whittle, and Lin He	455
Peroxynitrite Reacts with Biological Nitrogen-Containing Cyclic Molecules by a Radical Pathway, as Demonstrated by Ultraweak Luminescence Coupled with ESR Technique	Ange Mouithys-Mickalad, Stephan Kohnen, Carol Deby, Alfred F. Noels, Maurice Lamy, and Ginette Deby-Dupont	460
Activation of the Neutrophil NADPH Oxidase Is Inhibited by SB 203580, a Specific Inhibitor of SAPK2/p38	Aroon S. Lal, Andrew D. Clifton, John Rouse, Anthony W. Segal, and Philip Cohen	465
Functional Domains of Template-Activating Factor-I as a Protein Phosphatase 2A Inhibitor	Shoko Saito, Mary Miyaji-Yamaguchi, Tae Shimoyama, and Kyosuke Nagata	471
Regulation by Interleukin-1 β of Gene Expression of Bradykinin B ₁ Receptor in MH-S Murine Alveolar Macrophage Cell Line	Hideo Tsukagoshi, Yuji Shimizu, Takeo Horie, Yoshitatsu Fukabori, Yasuo Shimizu, Shigenori Iwamae, Takeshi Hisada, Tamotsu Ishizuka, Kunihiro Iizuka, Kunio Dobashi, and Masatomo Mori	476
<i>Escherichia coli</i> <i>cafA</i> Gene Encodes a Novel RNase, Designated as RNase G, Involved in Processing of the 5' End of 16S rRNA	Masaaki Wachi, Genryou Umitsuki, Miwa Shimizu, Ayako Takada, and Kazuo Nagai	483
Human Estrogenic 17 β -Hydroxysteroid Dehydrogenase: Predominance of Estrone Reduction and Its Induction by NADPH	Jiu-Zhen Jin and Sheng-Xiang Lin	489

ERRATA

Volume 257, Number 2 (1999), in Article ID bbrc.1999.0421, "Genotoxicity of Human Milk Extracts and Detection of DNA Damage in Exfoliated Cells Recovered from Breast Milk," by Francis L. Martin, Kathleen J. Cole, Gillian Weaver, Philip L. Grover, and David H. Phillips, pp. 319–326	494
Volume 257, Number 3 (1999), in Article ID bbrc.1999.0557, "Ca ²⁺ and Protein Kinase C Signaling for Histamine and Sulfidoleukotrienes Released from Human Cultured Mast Cells," by Masahiro Kimata, Michitaka Shichijo, Toru Miura, Isao Serizawa, Naoki Inagaki, and Hiroichi Nagai, pp. 895–900	503

Number 3, June 16, 1999

Pyrithione, a Zinc Ionophore, Inhibits NF- κ B Activation	Chul Hoon Kim, Joo Hee Kim, Seok Jun Moon, Kwang Chul Chung, Chung Y. Hsu, Jeong Taeg Seo, and Young Soo Ahn	505
DNA Binding and Transactivating Properties of the Paired and Homeobox Protein Pax4	Anna Kalousová, Vladimír Beneš, Jan Pačes, Václav Pačes, and Zbyněk Kozmik	510
Geraniol Is a Potent Inducer of Apoptosis-like Cell Death in the Cultured Shoot Primordia of <i>Matricaria chamomilla</i>	Shunsuke Izumi, Osamu Takashima, and Toshifumi Hirata	519
Direct Comparison of GAPDH, β -Actin, Cyclophilin, and 28S rRNA as Internal Standards for Quantifying RNA Levels under Hypoxia	Hua Zhong and Jonathan W. Simons	523

Detection of Exon Skipping and Retained Introns in Transcription of the Human Thrombospondin 2 Gene	Kenneth W. Adolph	527
Identification and Characterization of a Myristylated and Palmitylated Serine/Threonine Protein Kinase	Amy E. Berson, Chi Young, Sherie L. Morrison, Gregory H. Fujii, Julie Sheung, Bonnie Wu, Joseph B. Bolen, and Anne L. Burkhardt	533
Identification of the Major Site of <i>in Vitro</i> PKA Phosphorylation in the Polycystin-1 C-Terminal Cytosolic Domain	Stephen C. Parnell, Brenda S. Magenheimer, Robin L. Maser, and James P. Calvet	539
Attenuation of Haptoglobin Gene Expression by TGF β Requires the MAP Kinase Pathway	Shun-Jiang Yu, François Boudreau, Antoine Désilets, Mathieu Houde, Nathalie Rivard, and Claude Asselin	544
Regulators of G-Protein Signaling (RGS) 1 and 16 Are Induced in Response to Bacterial Lipopolysaccharide and Stimulate c-fos Promoter Expression	Rosemarie Panetta, Yang Guo, Sheldon Magder, and Michael T. Greenwood	550
Identification of Eukaryotic Parvulin Homologues: A New Subfamily of Peptidylprolyl <i>cis-trans</i> Isomerases	Stuart Rulten, Julian Thorpe, and John Kay	557
Chromogranin A Alters Ductal Morphogenesis and Increases Deposition of Basement Membrane Components by Mammary Epithelial Cells <i>in Vitro</i>	Jesus V. Soriano, Michael S. Pepper, Laurent Taupenot, Marie-France Bader, Lelio Orci, and Roberto Montesano	563
Purification of Multisubunit Membrane Protein Complexes: Isolation of Chloroplast F _o F ₁ -ATP Synthase, CF _o and CF ₁ by Blue Native Electrophoresis	Dirk Neff and Norbert A. Dencher	569
Functional Interaction of Poly(ADP-ribose) with the 20S Proteasome <i>in Vitro</i>	Philipp Mayer-Kuckuk, Oliver Ullrich, Mathias Ziegler, Tilman Grune, and Manfred Schweiger	576
Smt3, a SUMO-1 Homolog, Is Conjugated to Cdc3, a Component of Septin Rings at the Mother-Bud Neck in Budding Yeast	Yoshimitsu Takahashi, Masayuki Iwase, Mineko Konishi, Masato Tanaka, Akio Toh-e, and Yoshiko Kikuchi	582
Characterization of Lectin Resistant Cell Populations Derived from Human Colon Carcinoma: Correlation of K-Ras with β 1-6 Branching of N-Linked Carbohydrate and CEA Production	Donald C. Wojciechowicz, Robert G. Mallon, Antonio Picon, and Philip B. Paty	588
Intracellular Localization of the Fanconi Anemia Complementation Group A Protein	Christopher E. Walsh, Marcus R. Yountz, and Dennis A. Simpson	594
Selective Potentiation of Drug Cytotoxicity by NSAID in Human Glioma Cells: The Role of COX-1 and MRP	Arnd Roller, Oliver R. Bähr, Johannes Streffer, Stephan Winter, Michael Heneka, Martin Deininger, Richard Meyermann, Ulrike Naumann, Erich Gulbins, and Michael Weller	600
Acetate and Formate Uptake into Vesicles Isolated from the Basolateral Region of the Plasma Membrane of Ovine Parotid Acinar Cells	Ha-Van Nguyen and R. Brian Beechey	606

CHK Down-Regulates SCF/KL-Activated Lyn Kinase Activity in Mo7e Megakaryocytic Cells	Daniel J. Price, Benjamin Rivnay, and Hava Avraham	611
Activation of Telomerase Is Induced by a Natural Antigen in Allergen-Specific Memory T Lymphocytes in Bronchial Asthma	Yoshinori Haruta, Keiko Hiyama, Shinichi Ishioka, Soichiro Hozawa, Hiroyuki Maeda, and Michio Yamakido	617
Regulation of Leptin by Steroid Hormones in Rat Adipose Tissue	Kurt Kristensen, Steen B. Pedersen, and Bjørn Richelsen	624
A TSH/Dibutyryl cAMP Activated Cl^-/I^- Channel in FRTL-5 Cells	Akio Yoshida, Kimihiko Hattori, Ichiro Hisatome, Shinichi Taniguchi, Yoshihiko Ueta, Hiroko Hukui, Yuka Santo, Osamu Igawa, Chiaki Shigemasa, Shinji Kosugi, and Evelyn F. Grollman	631
Effect of Steroidal Saponins of <i>Anemarrhenae</i> Rhizoma on Superoxide Generation in Human Neutrophils	Jianying Zhang, Meiying Zhang, Kazunori Sugahara, Yasuhiro Sagara, Zhizun Meng, Suixu Xu, and Hiroyuki Kodama	636
X-Ray Structure of Glycerol Kinase Complexed with an ATP Analog Implies a Novel Mechanism for the ATP-Dependent Glycerol Phosphorylation by Glycerol Kinase	Chen Mao, Zahide Ozer, Min Zhou, and Fatih M. Uckun	640
Single Integrin Molecule Adhesion Forces in Intact Cells Measured by Atomic Force Microscopy	P. P. Lehenkari and M. A. Horton	645
Matrix-Mediated Changes in the Expression of HNF-4 α Isoforms and in DNA-Binding Activity of ARP-1 in Primary Cultures of Rat Hepatocytes	Dieter Runge, Dorothee M. Runge, Nikki Daskalakis, Kimberly A. Lubecki, William C. Bowen, and George K. Michalopoulos	651
Millisecond Analyses of Ca^{2+} Initiation Sites Evoked by Muscarinic Receptor Stimulation in Exocrine Acinar Cells	Haruo Takemura, Shohei Yamashina, and Akihisa Segawa	656
Store Ca^{2+} Depletion Enhances NMDA Responses in Cultured Human Astrocytes	Tomoyuki Nishizaki, Toshiyuki Matsuoka, Tamotsu Nomura, Takeshi Kondoh, Norihiko Tamaki, and Yasuhiro Okada	661
Characterization of DNA Binding Properties and Sequence Specificity of the Human 52 kDa Ro/SS-A (Ro52) Zinc Finger Protein	Mark Barton Frank	665
The Endothelial Cell Protein C Receptor (EPCR) Functions as a Primary Receptor for Protein C Activation on Endothelial Cells in Arteries, Veins, and Capillaries	Xiaofen Ye, Kenji Fukudome, Naoko Tsuneyoshi, Toshimi Satoh, Osamu Tokunaga, Keishin Sugawara, Hiroshi Mizokami, and Masao Kimoto	671
3,4-Methylenedioxymethamphetamine ("Ecstasy") Stimulates the Expression of $\alpha 1(\text{I})$ Procollagen mRNA in Hepatic Stellate Cells	M. Varela-Rey, C. Montiel-Duarte, G. Beitia, E. Cenarruzabeitia, and M. J. Iraburu	678
Effects of Exogenous Human Heparin-Binding Epidermal Growth Factor-Like Growth Factor on DNA Synthesis of Hepatocytes in Normal Mouse Liver	Shinichi Kiso, Sumio Kawata, Shinji Tamura, Shinobu Umeki, Nobuyuki Ito, Hirofumi Tsushima, Akira Yamada, Jun-ichiro Miyagawa, Shigeki Higashiyama, Naoyuki Taniguchi, and Yuji Matsuzawa	683

HMG CoA Reductase and LDL Receptor Genes Are Regulated Differently by 15-Ketosterols in Hep G2 Cells	Anastassia F. Kisseleva, Ludmila E. Goryunova, Richard Planells, Huguette Lafont, and Christian Alquier	688
Presence of Leptin in Breast Cell Lines and Breast Tumors	Susan N. O'Brien, Brenda H. Welter, and Thomas M. Price	695
Male Sterility in Transgenic Mice Expressing Activin β A Subunit Gene in Testis	Yoko Tanimoto, Keiji Tanimoto, Fumihiro Sugiyama, Hisashi Horiguchi, Kazuo Murakami, Ken-ichi Yagami, and Akiyoshi Fukamizu	699
Lens Proteins Block the Copper-Mediated Formation of Reactive Oxygen Species during Glycation Reactions <i>in Vitro</i>	B. J. Ortwerth and Hongying L. James	706

ERRATUM

Volume 190, Number 2 (1993), in the article "Isolation of a cDNA for Chicken Liver 6-Phosphofructo-2-kinase/Fructose-2,6-bisphosphatase," by Lin Li, Alex J. Lange, and Simon J. Pilkis, pages 397–405	711
Author Index for Volume 259	712

NOTICE

The Subject Index for Volume 259 will appear as part of a cumulative index for the year 1999.